MECHANICAL DATA

Bulb	T-6½
Base	E9-1, Miniature Button 9-Pin
Outline	6-2
Basing	9EG
Cathode	Coated Unipotential
Mounting Position	Any

ELECTRICAL DATA

HEATER CHARACTERISTICS

	5BE8	6BE8	
Heater Voltage (AC or DC)	4.7	6.3	Volts
Heater Current	600	450	Ma
Heater Warm-up Time[1]	11		Seconds
Heater-Cathode Voltage			
(Design Center Values)			
Heater Negative with Respect to Cathode			
Total DC and Peak	200	200	Volts Max.
Heater Positive with Respect to Cathode			
DC	100	100	Volts Max.
Total DC and Peak	200	200	Volts Max.

DIRECT INTERELECTRODE CAPACITANCES (Approx.)

Triode		
Grid to Plate (g to p)	1.8	μμf
Input: g to (k + pentode g3 + I.S. + h)	2.8	μμf
Output: p to (k + pentode g3 + I.S. + h)	1.5	μμf
Pentode		
Grid to Plate (g1 to p)	0.040	μμf Max.
Input: g1 to (k + g2 + h)	4.4	μμf
Output: p to (k + g2 + g3 + triode k + I.S. + h)	2.6	μμf
Plate to (k + g2 + h)	0.30	μμf
Coupling		
Triode Grid to Pentode Plate	0.010	μμf
Pentode Grid No. 1 to Triode Plate	0.009	μμf
Triode Plate to Pentode Plate	0.065	μμf

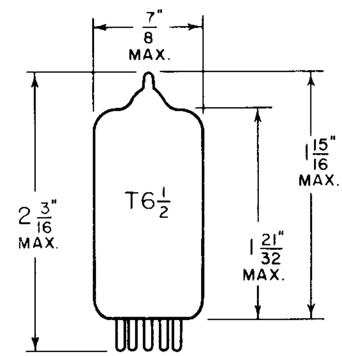
RATINGS (Design Center Values)

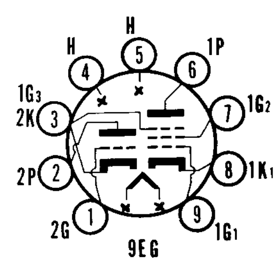
	Triode	Pentode	
Plate Voltage	300	300	Volts Max.
Grid No. 2 Supply Voltage		300	Volts Max.
Grid No. 2 Voltage	See Rating Chart		
Plate Dissipation	2.5	2.8	Watts Max.
Grid No. 2 Dissipation		0.5	Watt Max.
Positive Grid No. 1 Voltage	0	0	Volts Max.
Grid No. 1 Circuit Resistance[2]			
Fixed Bias	0.5	0.25	Megohm Max.
Self Bias	1.0	1.0	Megohm Max.

QUICK REFERENCE DATA

The Sylvania Type 6BE8 is a miniature, medium mu triode and sharp cutoff pentode intended for use as a vhf oscillator mixer. The basing is unique in that the pentode No. 3 grid and internal shield are connected to the triode cathode.

The 5BE8 employs controlled heater warm-up time for service in series string television recievers. Except for heater current and voltage the 5BE8 is identical to the 6BE8.





SYLVANIA ELECTRIC PRODUCTS INC.

RADIO TUBE DIVISION
EMPORIUM, PA.

Prepared and Released By The TECHNICAL PUBLICATIONS SECTION EMPORIUM, PENNSYLVANIA

OCTOBER 1955

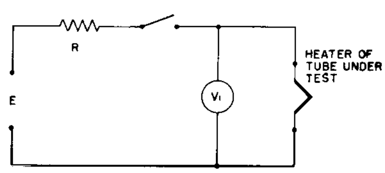
CHARACTERISTICS AND TYPICAL OPERATION

Class A_1 Amplifier[3]

	Triode	Pentode	
Plate Voltage	150	250	Volts
Grid No. 2 Voltage		110	Volts
Grid No. 1 Voltage	0	0	Volts
Cathode Bias Resistor	56	68	Ohms
Amplification Factor	40		
Plate Resistance (approx.)	.005	0.4	Megohm
Transconductance	8500	5200	μmhos
Plate Current	18	10	Ma
Grid No. 2 Current		3.5	Ma
Grid No. 1 Voltage (approx.) for $I_b = 10\ \mu a$	-12	-10	Volts

NOTES:

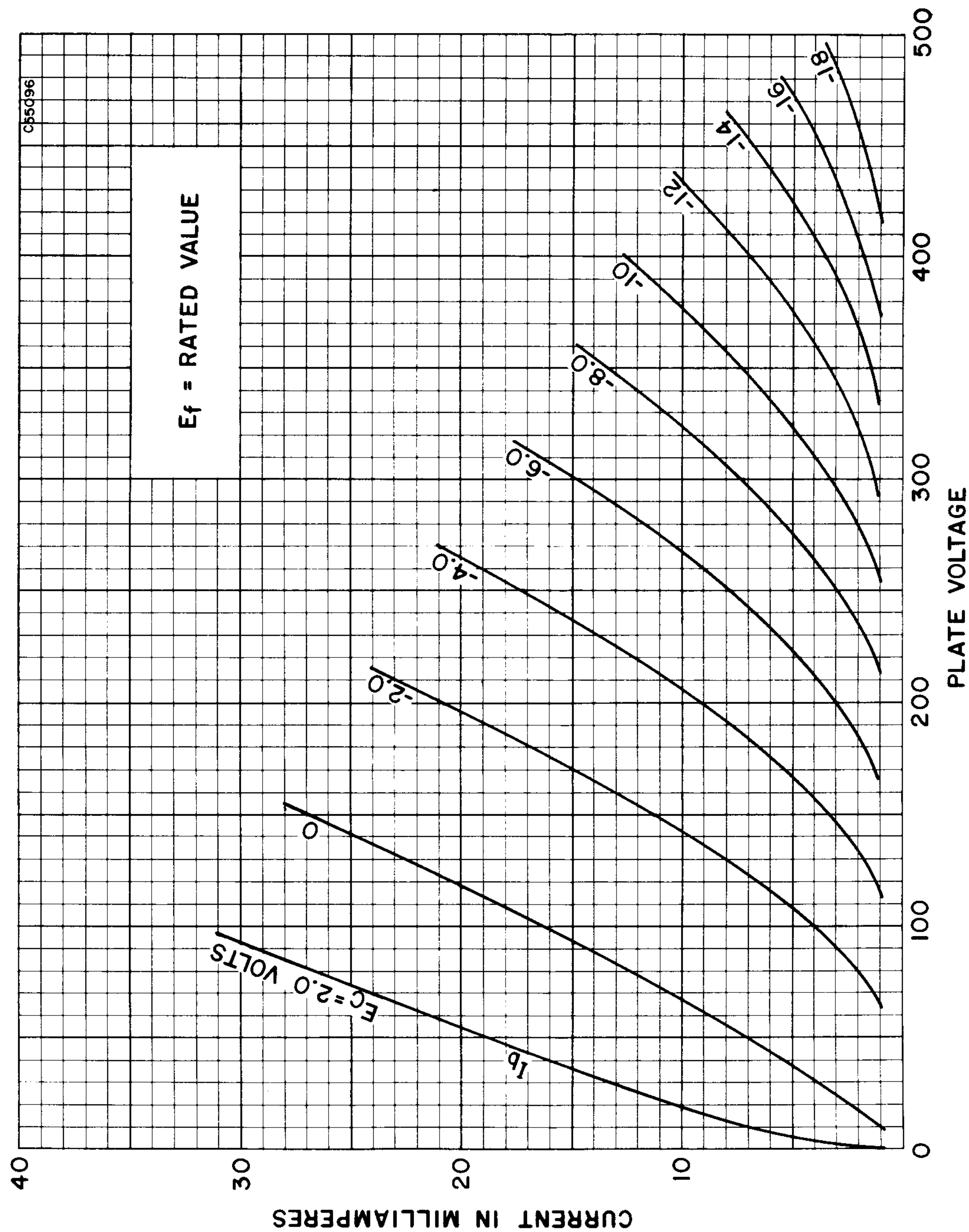
1. *Heater Warm-up Time is defined as the time required in the circuit shown below for the voltage across the heater terminals to increase from zero to the heater test voltage (V1). The conditions used in conjunction with the test circuit depend upon the rated heater voltage and current of the tube under test. For this type: E = 18.8 Volts, R = 23.6 Ohms, V1 = 3.75 Volts.*



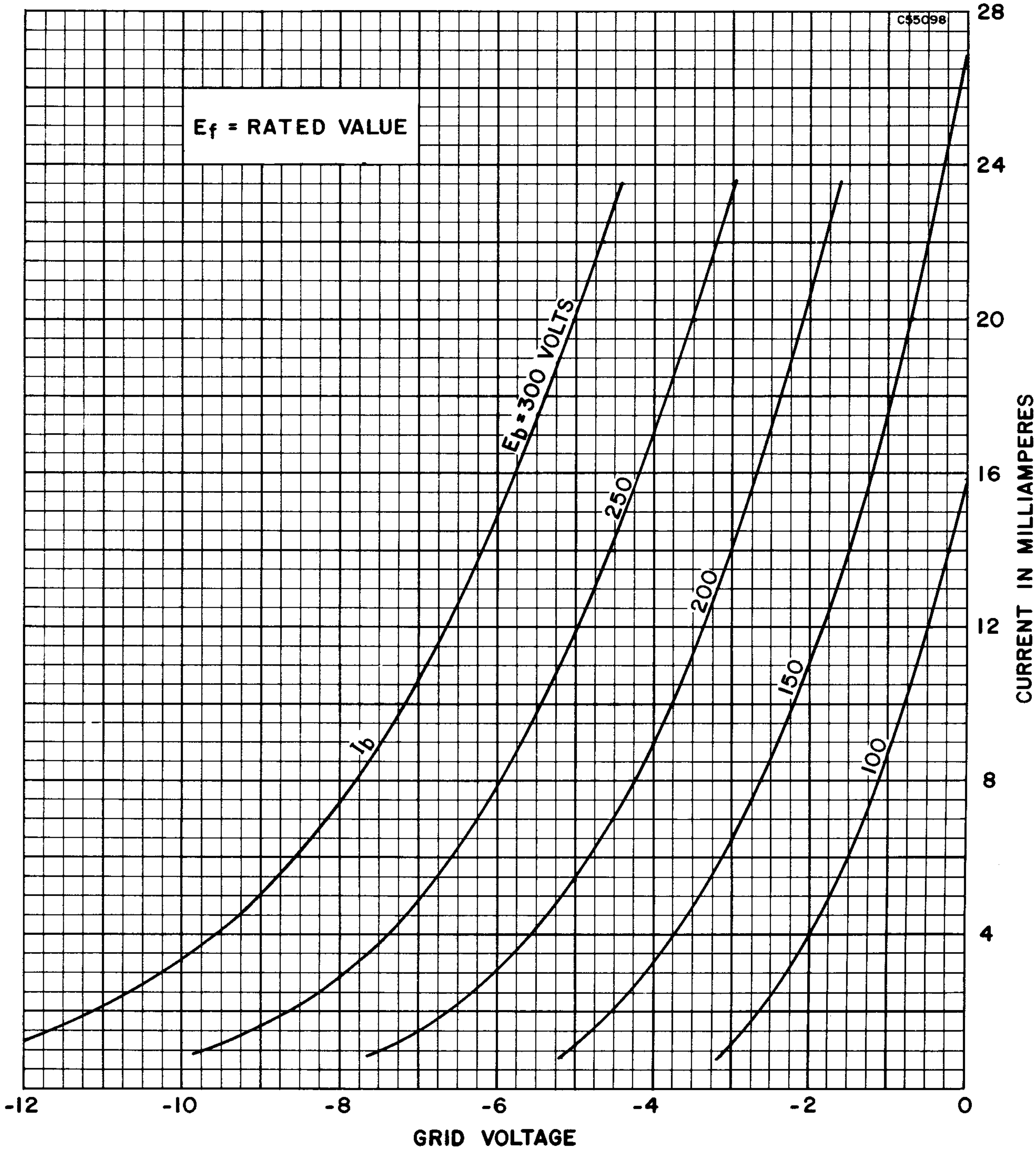
E — Applied Voltage, RMS or DC
R — Total Series Resistance
V1 — Heater Test Voltage, RMS or DC (80% Rated Heater Voltage)

2. *If either unit is operating at maximum rated conditions, Grid No. 1 Circuit Resistance for both units shall not exceed the stated values.*
3. *When reading characteristics of the pentode section all triode elements shall be at ground potential. Thus, because of internal connections to Pin No. 3, the pentode suppressor will also be at ground.*

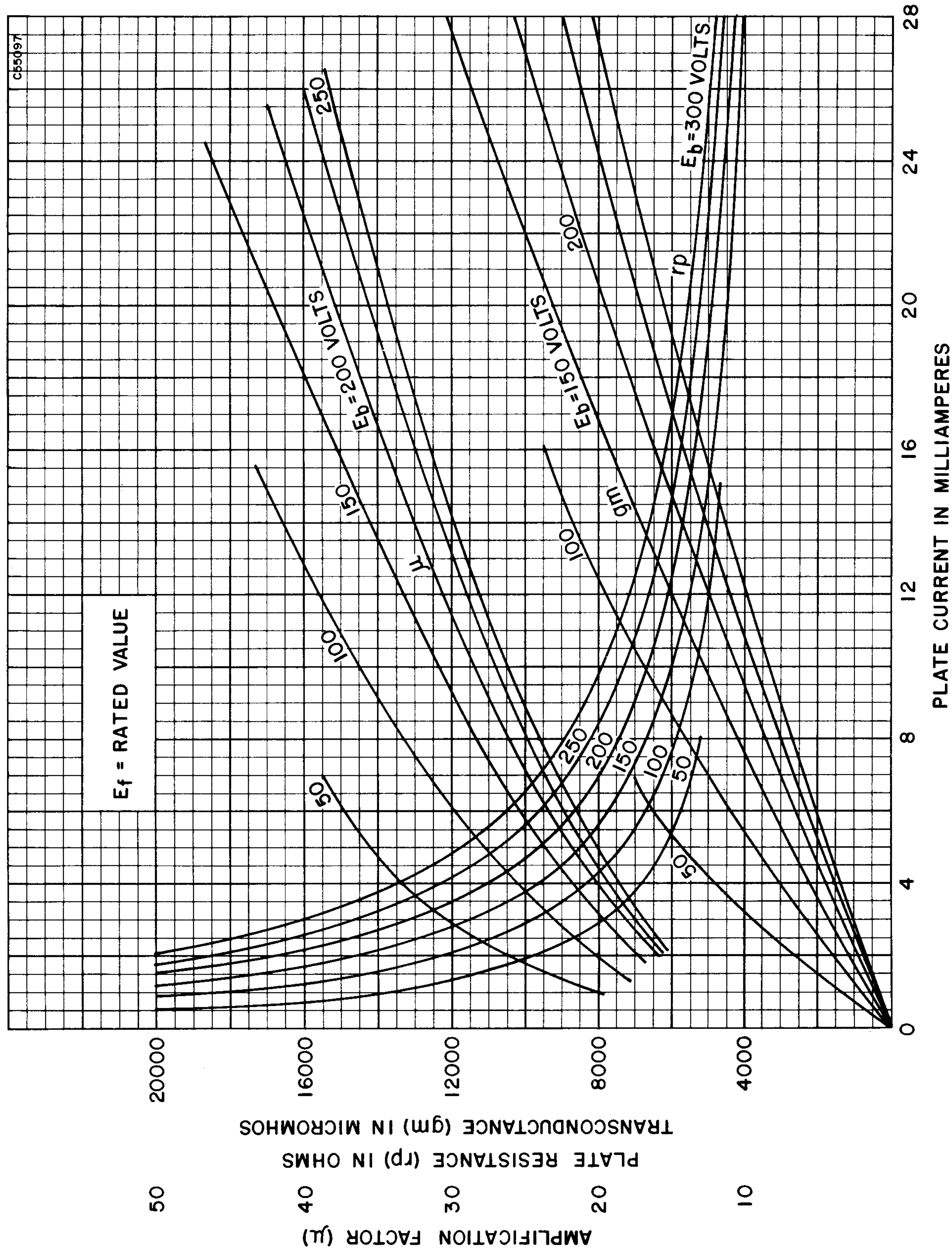
AVERAGE PLATE CHARACTERISTICS
(TRIODE SECTION)



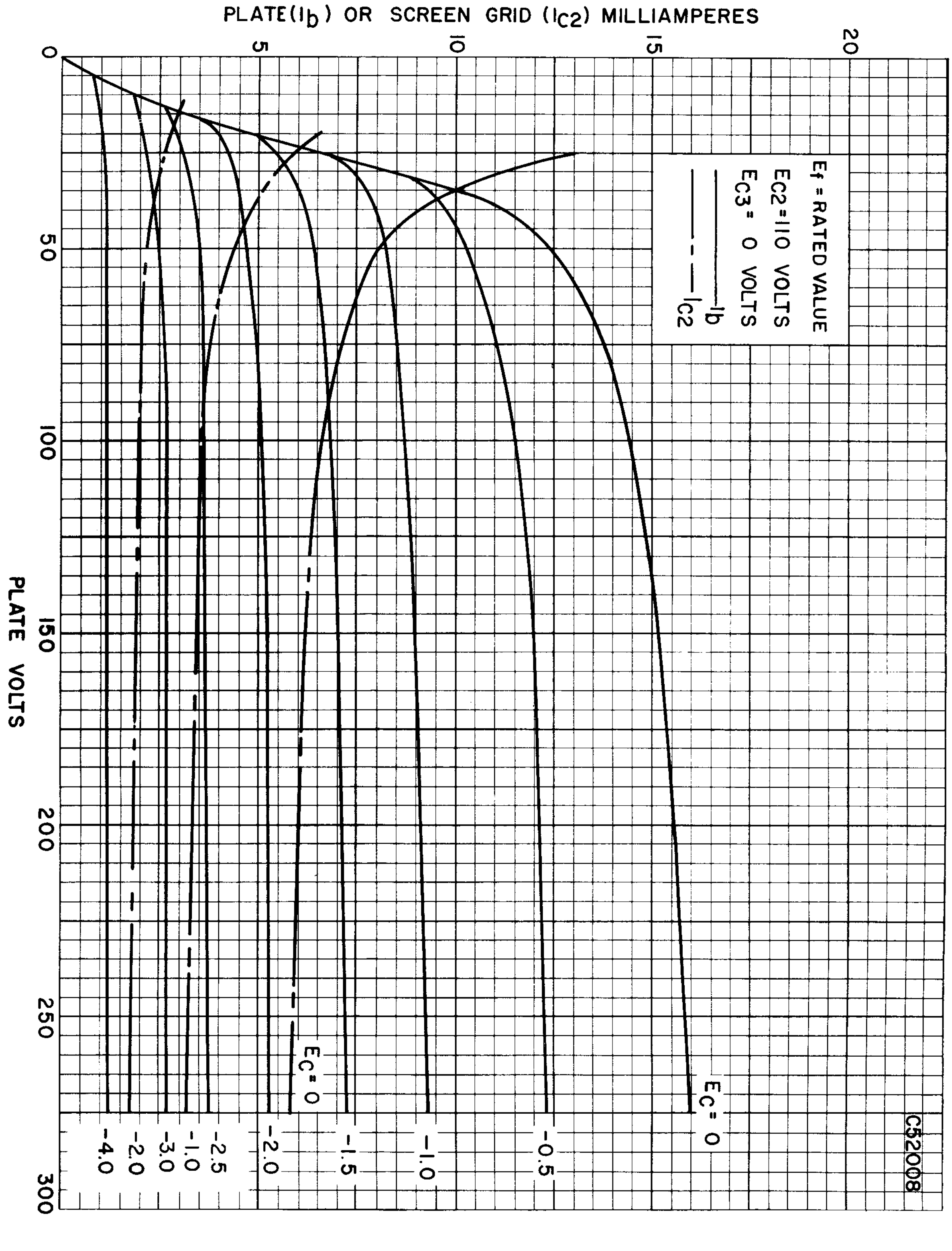
AVERAGE TRANSFER CHARACTERISTICS
(TRIODE SECTION)



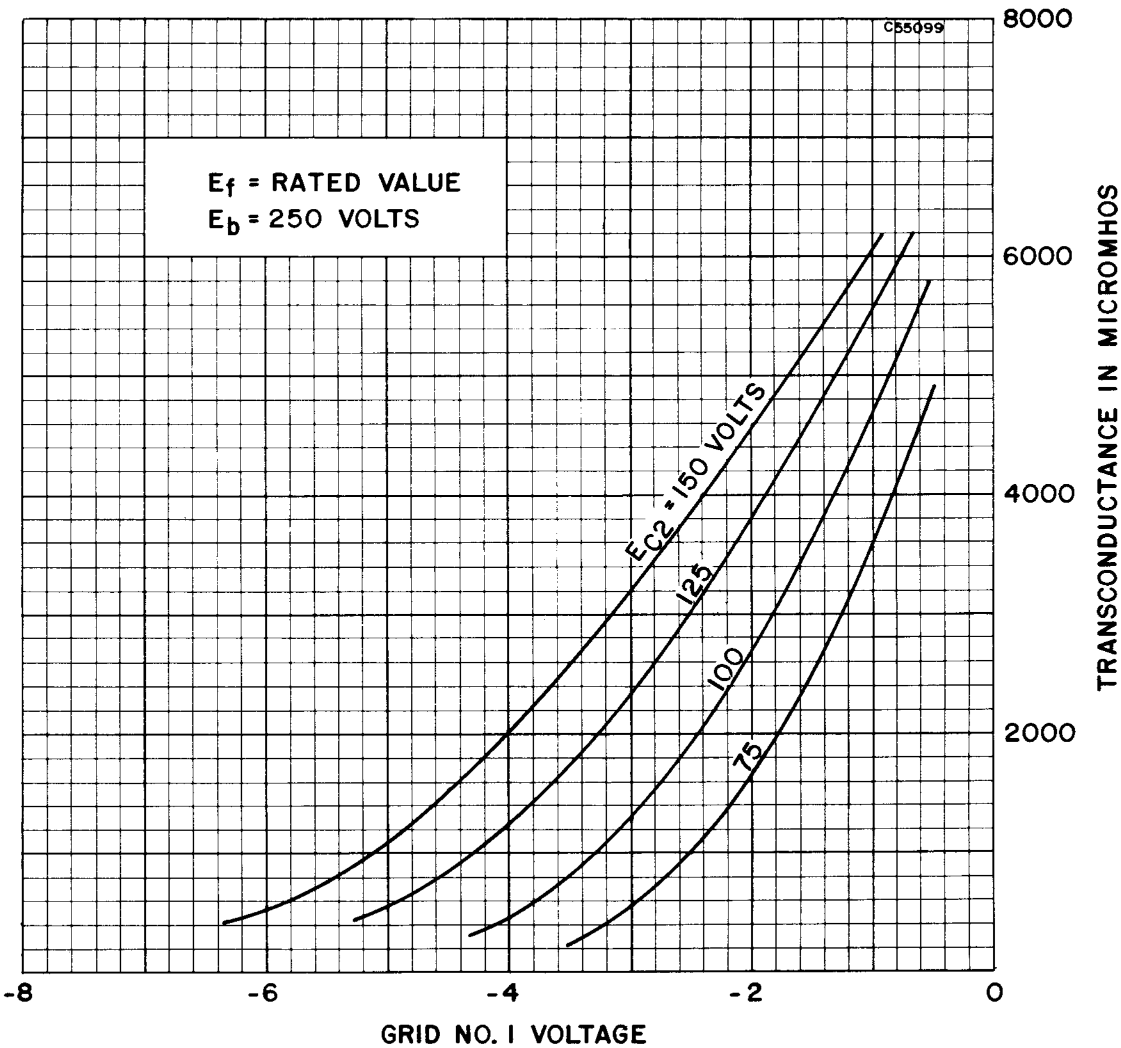
AVERAGE CHARACTERISTICS
(TRIODE SECTION)



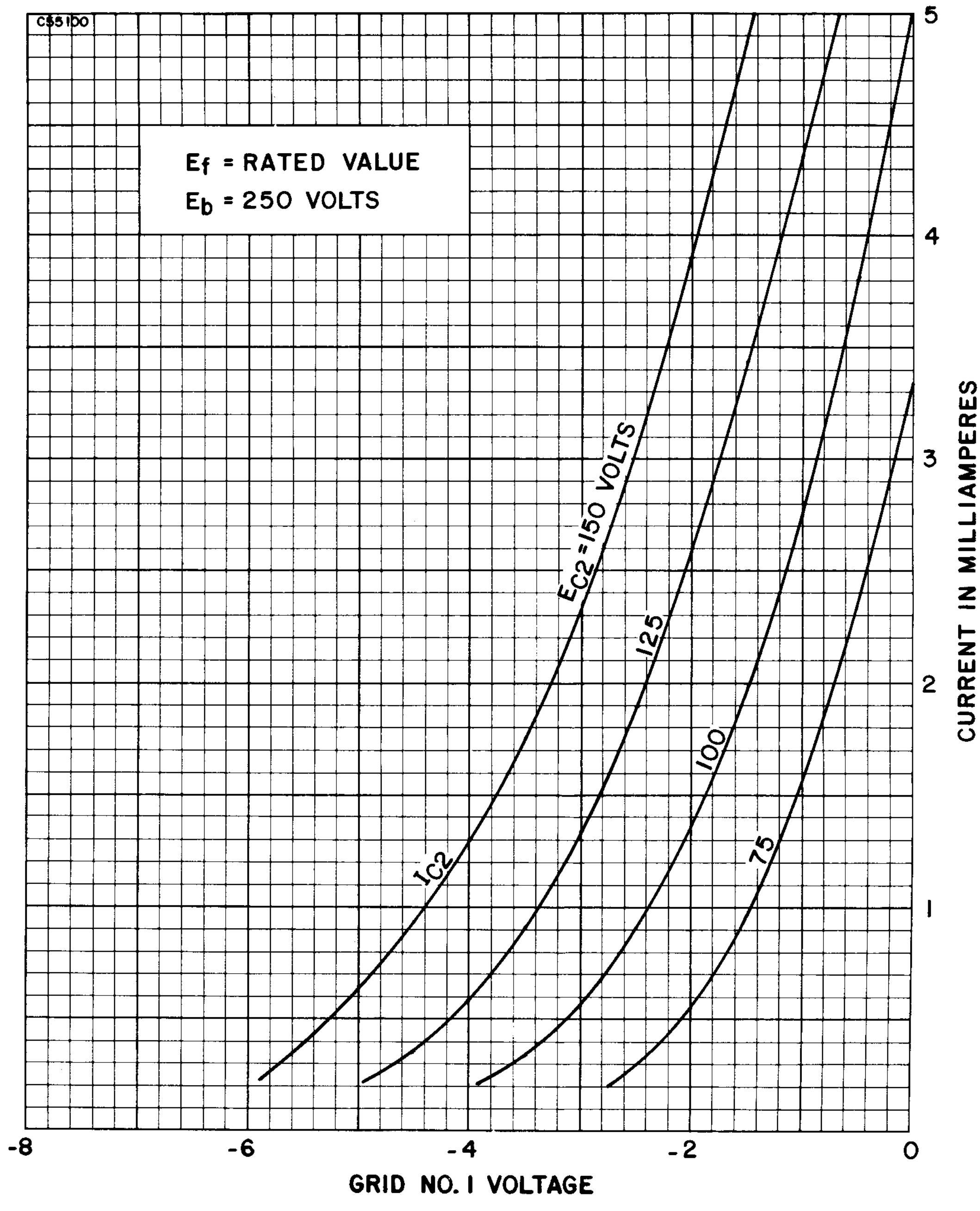
AVERAGE PLATE CHARACTERISTICS
(PENTODE SECTION)



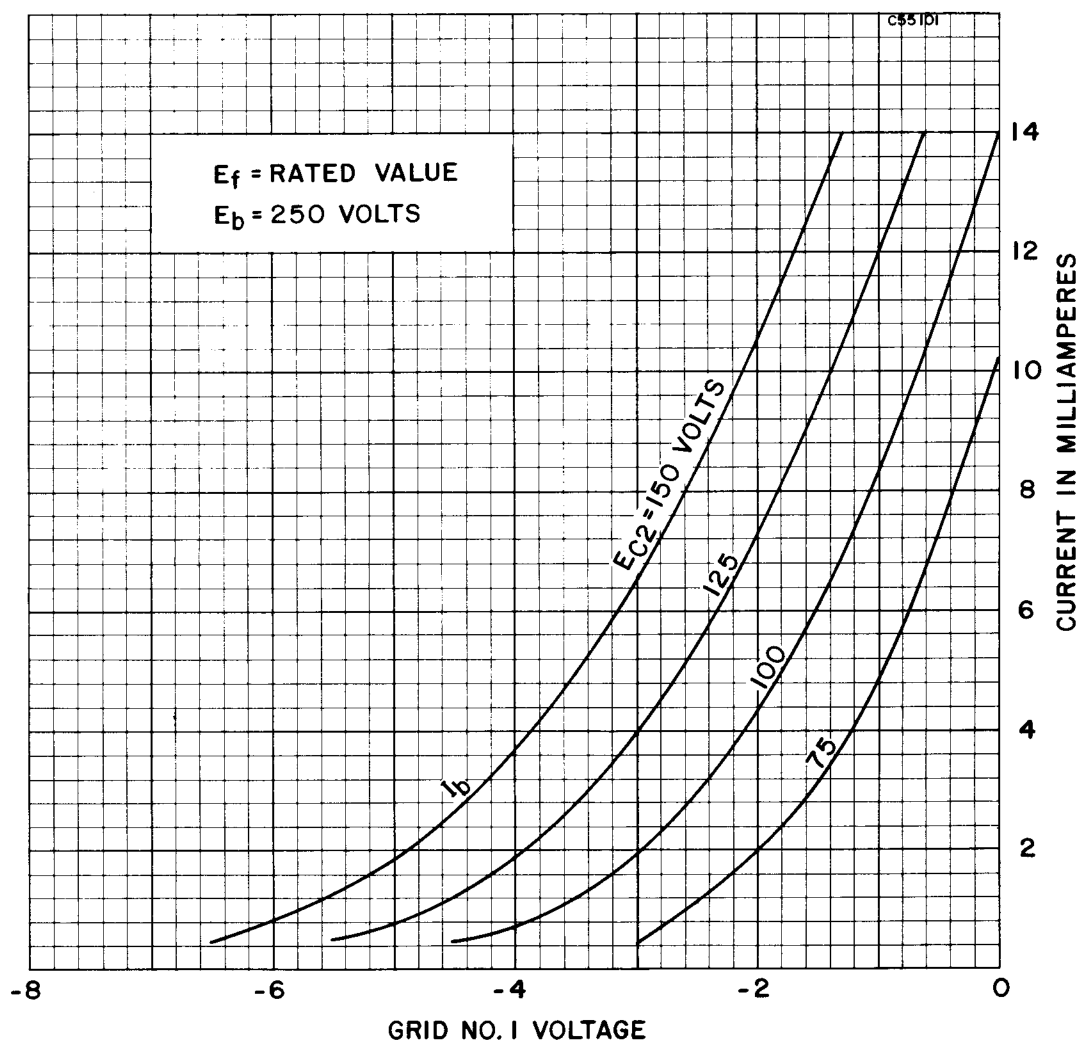
AVERAGE TRANSFER CHARACTERISTICS
(PENTODE SECTION)



AVERAGE TRANSFER CHARACTERISTICS
(PENTODE SECTION)



AVERAGE TRANSFER CHARACTERISTICS
(PENTODE SECTION)



RATING CURVE

